

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE CONSTRUCTION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD 30 (HANOVER PIKE) AND MAPLE GROVE ROAD IN CARROLL COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A NEMA 6 BASE MOUNTED CONTROLLER CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION SHALL OPERATE IN A FULLY ACTUATED MODE USING 4 NEMA PHASES. OVERHEAD VIDEO DETECTION CAMERAS SHALL BE INSTALLED FOR THE LEFT TURN ACTUATION OF SOUTHBOUND MD 30 AND THE PRESENCE DETECTION OF MAPLE GROVE ROAD.

NOTES

- VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- FOR FINAL PAVEMENT MARKINGS REFER TO THE PAVEMENT MARKING PLANS, OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.
- ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITIY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALL AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.

SPECIAL NOTES

- THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. JOHN CONCANNON, ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 624-8140  
MR. JOHN HUCHROWSKI, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (301) 624-8200  
MR. RAYMOND JOHNSON, ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 624-8105  
MS. ANDREA ABEND, UTILITY ENGINEER  
PHONE: (301) 624-8115  
MR. ED RODENHIZER, CHIEF OF SIGNAL SHOP OPERATIONS  
PHONE: (410) 787-7650  
MR. EUGENE BAILEY, CHIEF OF SIGN SHOP OPERATIONS  
PHONE: (410) 787-7670  
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630  
MR. ROBERT SNYDER, ASSISTANT DIVISION CHIEF OF TOD  
PHONE: (410) 787-7631

- MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MSHA STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

- A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

DESCRIPTION

NONE

- B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

DESCRIPTION

4 CHANNEL DETECTOR AMPLIFIER  
CONTROLLER CABINET, SIZE 6  
CONTROLLER ASC II WITH TELEMETRY  
VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS  
SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN

UNITS

QUANTITY

UNITS

QUANTITY

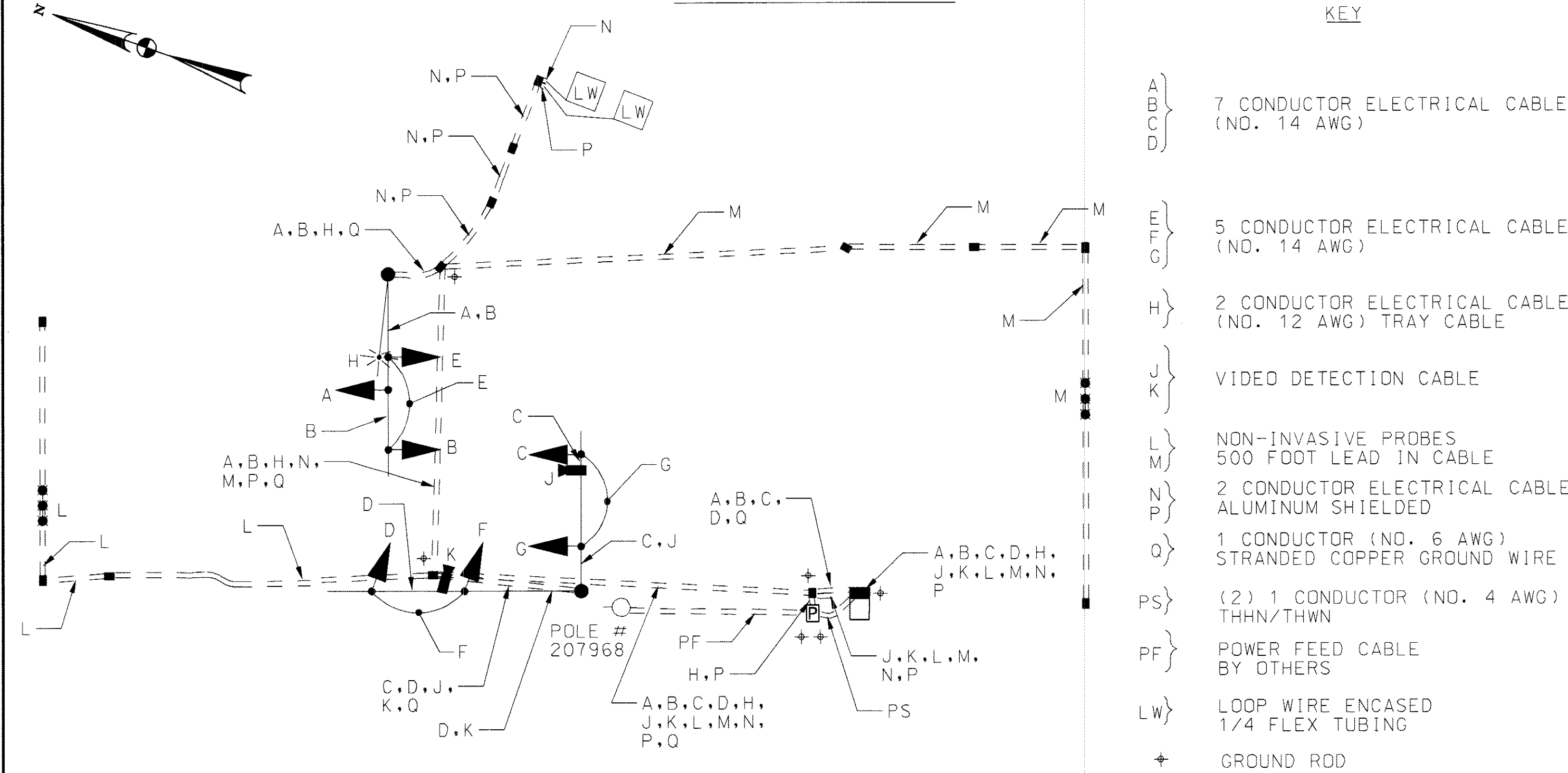
D-3(2) (VAR. x 16")  
D95-25 (24" X 24")  
M95-1(MOD) (72" X 40")  
SHEET ALUMINUM GROUND MOUNTED SIGNS  
W3-3 (36" X 36")  
MAINTENANCE OF TRAFFIC  
TEST PIT EXCAVATION  
24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVING MARKINGS  
12 INCH LED SIGNAL HEAD SECTION RYG  
8 INCH LED SIGNAL HEAD SECTION RYG  
EMBEDDED METERED SERVICE PEDESTAL  
F & I STEEL MAST ARM POLE WITH TWIN 60 AND 50 FOOT MAST ARMS  
F & I MAST ARM POLE AND 38 FT MAST ARM  
NON-INVASIVE DETECTOR, WITH 500 FOOT LEAD IN CABLE  
VIDEO DETECTION CAMERA AND CABLE 250 FOOT LENGTH  
2 INCH PVC SCHEDULE 80 RIGID ELECTRICAL CONDUIT - TRENCHED  
3 INCH PVC SCHEDULE 80 RIGID ELECTRICAL CONDUIT - BORED  
4 INCH PVC SCHEDULE 80 RIGID ELECTRICAL CONDUIT - BORED  
3 INCH PVC SCHEDULE 80 RIGID ELECTRICAL CONDUIT - TRENCHED  
4 INCH PVC SCHEDULE 80 RIGID ELECTRICAL CONDUIT - TRENCHED  
NO. 6 AWG STRANDED BARE COPPER GROUND WIRE  
ELECTRICAL CABLE 1- CONDUCTOR NO. 4 AWG - THHN/THWN  
FURNISH AND INSTALL ELECTRICAL HANDHOLE  
CUT CLEAN GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE  
INSTALL OVERHEAD SIGN INCLUDING ALL HARDWARE  
INSTALL GROUND MOUNTED SIGN INCLUDING ALL HARDWARE  
15 FT. LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUM.  
ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG  
ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG  
ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG ALUMINUM SHIELDED  
ELECTRICAL CABLE - 2 CONDUCTOR NO. 12 AWG TRAY CABLE  
INSTALL CONTROLLER AND CABINET - BASE MOUNT  
SAW CUT FOR DETECTORS  
1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE  
LOOP WIRE (NO. 14 AWG) ENCASED IN 1/4 IN. FLEXIBLE TUBING  
GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH  
WOOD SIGN SUPPORTS 4 IN. X 6 IN.

- C. MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART

	1	2	3	4	5	6	7	
	R	R	Y R Y G	Y R Y G	R	R	R	
	Y	Y	G	G	Y	Y	Y	
	G	G	G	G	G	G	G	
PHASE 1 AND 6	R	R	G/G-	G/G-	G	R	R	
1 CHANGE	R	R	Y/G-	Y/G-	G	R	R	
PHASE 2 AND 6	G	G	G	G	G	R	R	
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	
PHASE 4	R	R	R	R	R	G	G	
4 CHANGE	R	R	R	R	R	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	

WIRING DIAGRAM



KEY

- A, B, C, D } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)  
E, F, G, H } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)  
I, J, K, L } 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE  
M, N, O, P } VIDEO DETECTION CABLE  
Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.
- PS } (2) 1 CONDUCTOR (NO. 4 AWG) THHN/THWN  
PF } POWER FEED CABLE BY OTHERS  
LW } LOOP WIRE ENCASED 1/4 FLEX TUBING  
+ } GROUND ROD



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 30 (HANOVER PIKE)  
AT MAPLE GROVE ROAD**  
MANCHESTER, MARYLAND

GENERAL INFORMATION PLAN

SCALE 1/2"=1' DATE DECEMBER, 2008 CONTRACT NO. BW996M82

DESIGNED BY S. SMITH COUNTY CARROLL

DRAWN BY S. SMITH LOGMILE 06003005.69

CHECKED BY P. SILBERMAN T.I.M.S. NO. 1721

F.A.P. NO.  TOD NO.

TS NO. 4701-GI DRAWING 2 OF 2 SHEET NO.  OF



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